UC Berkeley

Plantopedia

A GUIDE TO THE TOP 20 MOST COMMON PLANTS ON CAMPUS

Ella Brie Mayor

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Printed in the United States of America.

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ARMENIAN BLACKBERRY

Rubus armeniacus

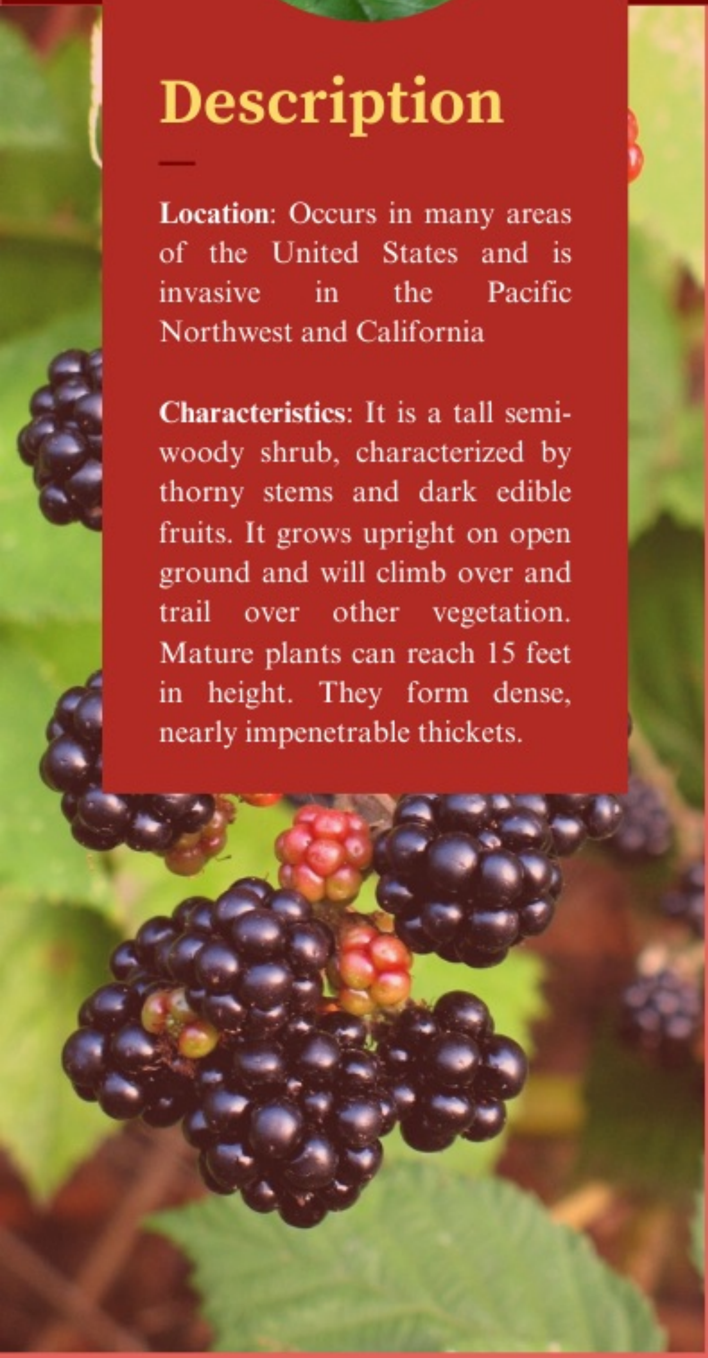
Armenian Blackberry

Botanical and Ecological Characteristics

Description

Location: Occurs in many areas of the United States and is invasive in the Pacific Northwest and California

Characteristics: It is a tall semi-woody shrub, characterized by thorny stems and dark edible fruits. It grows upright on open ground and will climb over and trail over other vegetation. Mature plants can reach 15 feet in height. They form dense, nearly impenetrable thickets.



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The Armenian Blackberry is highly invasive in the wild and has an extensive root system. Its roots can reach depths of up to 6.5 feet underground, penetrating deep into the soil in order to help it access water during dry periods. However, this characteristic makes it extremely difficult to remove. Furthermore, the Armenian Blackberry has canes that are covered in sharp thorns which provides extra protection towards herbivores, making it even more difficult to remove. What's particularly interesting about this plant is that it posesses allelopathic properties, meaning it has the unique ability to release chemicals in the soil that inhibit the growth of other plants, thus dominating other native vegetation. The plant forms dense thickets that end up choking out other plants, altering habitats, and hindering regeneration. To spread its seeds and take over certain areas, birds eat the berries and disperse the seeds far distances via its droppings. Adding to its invasive nature, Armenian Blackberry plants are able to resprout from its roots even after attempted removal or burning. This adaptability means it can also tolerate a large range of soil type sand environments. Despite its invasiveness, its fruit is edible and commonly used in jams, desserts, and more.

Taxonomy

Kingdom: Plantae
Clade: Angiosperms
Clade: Eudicots

Clade: Rosids
Order: Rosales
Family: Rosaceae

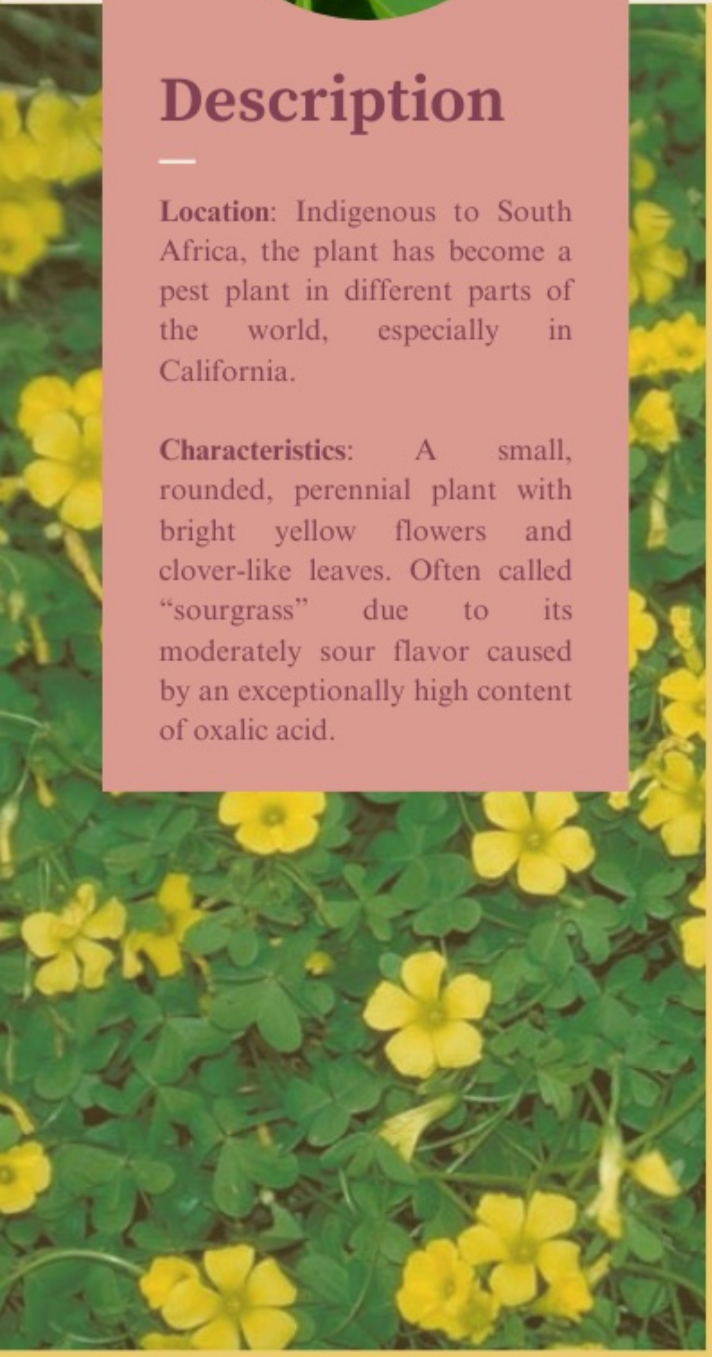
Genus: Rubus
Subgenus: Rubus
Species: Rubus armeniacus

BERMUDA BUTTERCUP

Oxalis pes-caprae

Bermuda Buttercup

Botanical and Ecological Characteristics



Description

Location: Indigenous to South Africa, the plant has become a pest plant in different parts of the world, especially in California.

Characteristics: A small, rounded, perennial plant with bright yellow flowers and clover-like leaves. Often called "sourgrass" due to its moderately sour flavor caused by an exceptionally high content of oxalic acid.

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A key feature of this flower is its underground bulbils. As its main method of reproduction, the Bermuda buttercup's bulb-like structures allow it to survive in the soil for long periods of time and also continue to grow even after above-ground portions are destroyed. Since it reproduces almost exclusively through these vegetative means, they are able to form large, genetically identical populations that become difficult to control. Also, it's high oxalic acid content gives it a sour taste which deters some herbivores and makes it toxic to livestock if consumed heavily. As a highly invasive plant, it thrives in disturbed soils and where mild, wet winters exist. As a result, it outcompetes native plants by forming dense mats that work to inhibit the growth of other plants and reduce biodiversity in some communities. Furthermore, its flowers are highly sensitive to light and temperature so that in bright light it opens while at night it closes. This way, the plant is able to protect its reproductive organs from adverse weather. The specific epithet *pes-caprae* means 'goat's-foot', possibly in reference to the shape of the leaf. Another feature of the Bermuda Buttercup is that it has been used previously in traditional medicine due to its high vitamin C content.

Taxonomy

Kingdom: Plantae
Clade: Angiosperms

Clade: Eudicots
Order: Oxalidales
Family: Oxalidaceae

Genus: Oxalis
Species: Oxalis pes-caprae

CALIFORNIA BAY LAUREL

Umbellularia californica

California Bay Laurel

Botanical and Ecological Characteristics

Description

Location: Native to coastal forests and the Sierra foothills of California, and to coastal forests extending into Oregon.

Characteristics: California bay laurels are broad-leaved evergreen trees with crowns that can be rounded, oblong, or pyramid-shaped. While young trees have smooth bark, the bark becomes flaky and scaly as they mature.

The California Bay Laurel has leaves that are leathery, lance-shaped, and emit a strong, spicy fragrance when crushed. This is a result of its volatile oils that contain compounds such as cineole and eucalyptol that give it such a distinctive smell. As seen in the photo above the section titled "description," this tree also produces small, yellowish-green flowers that bloom in late winter to early spring and are pollinated by insects. As a vital part of the ecosystem, bay laurels provide food and habitat to wildlife since its leaves and fruits are consumed by deer, birds, and rodents, while the dense canopy they provide gives shelter to a variety of species. What's fascinating about California Bay Laurels is that it's relatively fire-resistant due to its thick bark, therefore allowing it to survive in fire-prone regions. They can quickly recover from a fire by resprouting from their root crown. However, this tree is also a host for the pathogen *Phytophthora ramorum* which causes sudden oak death. Though it is not usually killed by this pathogen, they are able to spread the disease to nearby oak trees. In terms of medicine, the bay laurel's leaves have been crushed and inhaled by indigenous people as a remedy for headaches, colds, and stomach problems.

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Taxonomy

Kingdom: Plantae
Clade: Angiosperms

Clade: Magnoliids
Order: Laurales
Family: Lauraceae

Genus: Umbellularia
Species: Umbellularia californica

CALIFORNIA BUCKEYE

Aesculus californica

California Buckeye

Botanical and Ecological Characteristics

Description

Location: Widely distributed in California, growing along the central coast and in the lower elevations of the Sierra Nevada and Cascade Range. Its range extends to the foothills of the Siskiyou Mountains in the Rogue Valley in Oregon.

Characteristics: A large deciduous shrub or small tree, up to 4–12 m (13–39 ft) tall, with gray bark often coated with lichens and mosses. It typically is multi-trunked, with a crown as broad as it is high.

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The California Buckeye tree produces showy, upright clusters of creamy-white or pale yellow flowers in late spring or early summer which attract bees as pollinators.

It also produces a spiky, round capsule of fruit that contain 1-3 large seeds called "buckeyes." If ingested, these glossy brown seeds could potentially be toxic. Symptoms include nausea and vomiting, primarily due to the high content of aesculin and other toxic compounds. The buckeye is typically found in lower elevations of California and in foothills where it thrives in well-drained soils and can tolerate drought conditions. It is also highly adapted to survive in hot, dry climates since it sheds its leaves during the late summer or early fall seasons as a mechanism to conserve water during the hottest, driest months. The tree is highly drought-tolerant due to its ability to drop its leaves during the dry season, effectively entering a period of dormancy to conserve water. The flowers of the California buckeye are adapted for pollination by bees and other insects. Unlike many deciduous trees, the California buckeye often sheds its leaves in late summer rather than autumn, helping it avoid water stress during the peak of the dry season.

Taxonomy

Kingdom: Plantae
Clade: Angiosperms
Clade: Eudicots

Clade: Eudicots
Order: Sapindales
Family: Sapindaceae

Genus: Aesculus
Species: Aesculus californica

CALIFORNIA POPPY

Eschscholzia californica

California Poppy

Botanical and Ecological Characteristics

Description

Location: Native to the western United States, primarily found throughout California, with populations extending into Oregon, Nevada, and parts of Arizona

Characteristics: A wildflower that blankets fields and hillsides with bright orange to yellow blooms from early spring to late summer. As the state flower of California, it symbolizes the state's natural beauty and resilience.

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Its bright orange to yellow, cup-shaped petals exhibit a unique behavior known as nyctinasty, where they open during the day and close at night or in cloudy weather to protect the flower's reproductive organs from moisture and temperature fluctuations. This plant is highly drought-tolerant, with a deep taproot system that allows it to access water from deeper soil layers, making it well-suited to California's arid, Mediterranean climate. After events like wildfires, the poppy quickly establishes itself, stabilizing the soil and creating a foundation for other plant species to grow. Its seeds possess a remarkable ability to remain dormant in the soil for years, germinating only when conditions are favorable, such as after sufficient rainfall, which contributes to its widespread distribution and persistence in various habitats. The flower's bright color attracts a variety of pollinators, including bees and beetles, which aid in the plant's pollination process. Unlike the true poppies, the California poppy does not contain opiates but is instead rich in alkaloids like californidine, which contribute to its mild sedative effects. Indigenous peoples of California have historically used the plant for its medicinal properties, particularly in pain relief and as a sleep aid.

Taxonomy

Kingdom: Plantae
Clade: Angiosperms

Clade: Eudicots
Order: Ranunculales
Family: Papaveraceae

Genus: Eschscholzia
Species: Eschscholzia californica

COAST LIVE OAK

Quercus agrifolia

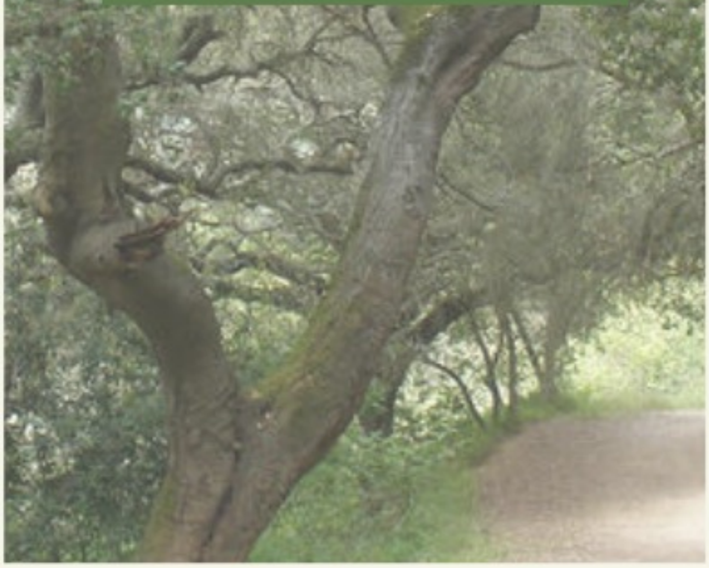
Coast Live Oak

Botanical and Ecological Characteristics

Description

Location: Grows west of the Sierra Nevada mountain range from Mendocino County, California, south to northern Baja California in Mexico.

Characteristics: Coast live oak is a native, drought-resistant, evergreen tree, ranging in height from 19 to 82 feet (6-25 m) and in diameter from 1 to 4 feet (0.3-1.2 m).



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Its thick, leathery leaves are adapted to reduce water loss, featuring spiny edges and a waxy coating that helps the tree thrive in the region's Mediterranean climate, characterized by wet winters and dry summers. The tree's deep root system allows it to access groundwater during droughts, while its extensive lateral roots stabilize soil, making it resilient to erosion and able to anchor itself on steep hillsides. A key feature of the coast live oak is its symbiotic relationship with mycorrhizal fungi, which colonize the tree's roots. This mutualistic association enhances the tree's ability to absorb water and nutrients, particularly phosphorus, from the soil. In return, the fungi receive carbohydrates produced by the tree through photosynthesis. This relationship is critical for the tree's survival in nutrient-poor soils and contributes to the health of the surrounding ecosystem by supporting soil fertility and plant diversity. Its acorns are a vital food source for many animals, including squirrels, deer, and various bird species, while its dense canopy offers shelter for birds, insects, and small mammals. Interestingly, the tree's thick bark protects it from the heat of wildfires, while its ability to resprout from the root crown allows it to recover quickly after fire damage.

Taxonomy

Kingdom: Plantae
Clade: Angiosperms
Clade: Eudicots

Clade: Rosids
Order: Fagales
Family: Fagaceae
Genus: Quercus

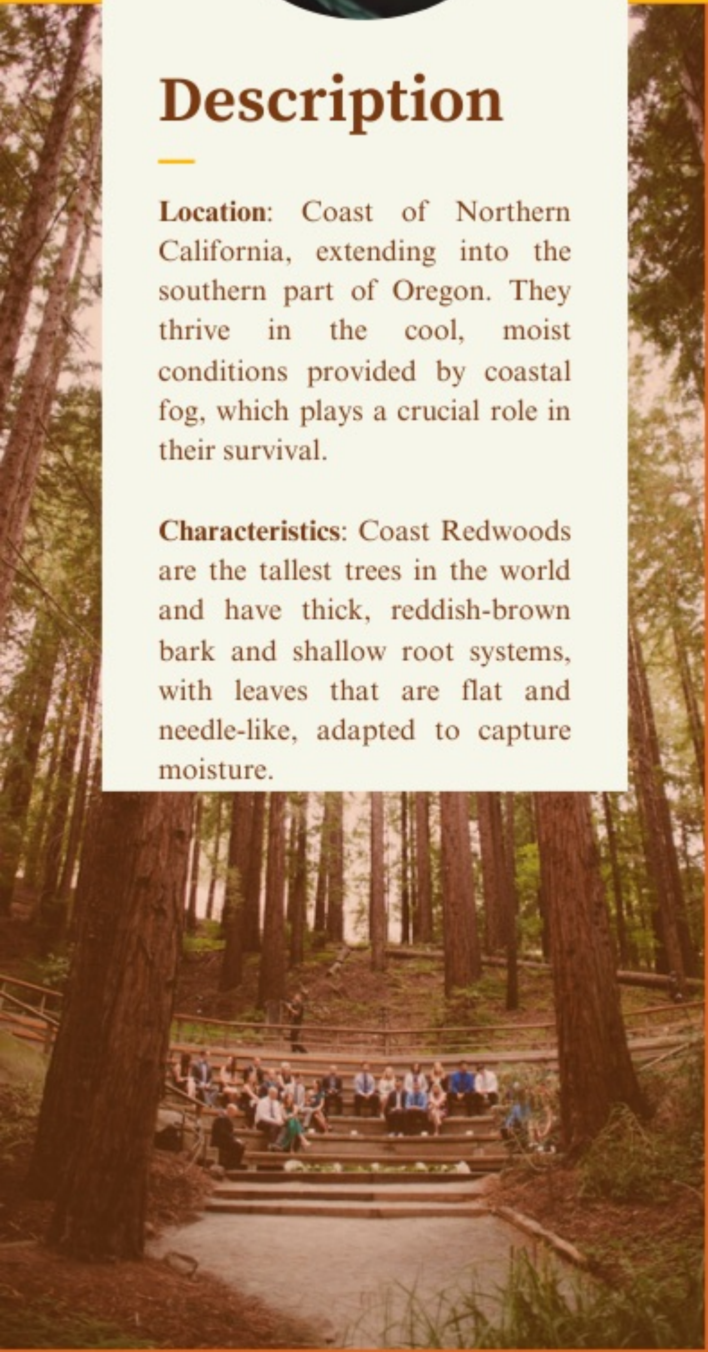
Subgenus: Quercus
Section: Lobatae (Red oaks)
Species: Quercus agrifolia

COAST REDWOOD

Sequoia sempervirens

Coast Redwood

Botanical and Ecological Characteristics



Description

Location: Coast of Northern California, extending into the southern part of Oregon. They thrive in the cool, moist conditions provided by coastal fog, which plays a crucial role in their survival.

Characteristics: Coast Redwoods are the tallest trees in the world and have thick, reddish-brown bark and shallow root systems, with leaves that are flat and needle-like, adapted to capture moisture.

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It is the tallest tree species on Earth, with some individuals reaching heights of over 350 feet. The tree's height is supported by a unique vascular system that efficiently transports water and nutrients from the roots to the canopy, even at extreme heights. Its thick, fibrous bark, which can be up to a foot thick, provides remarkable protection against fire, insects, and disease, contributing to its long lifespan—often exceeding 2,000 years. Coast redwoods have a shallow but extensive root system that spreads out over large areas, intertwining with the roots of neighboring redwoods. This interconnected root network provides stability and helps the trees withstand strong winds and floods. The ecology of coast redwoods is closely tied to the fog that blankets California's coastal regions. These trees are specially adapted to capture moisture from the fog through their needles, which then drips down to the roots or directly into the soil, providing a significant portion of the water they need to survive during the dry summer months. This adaptation allows the coast redwood to thrive in areas where rainfall alone would be insufficient to support such large trees. Their towering canopies create a unique microenvironment that supports a diverse range of plant and animal species.

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Clade: Gymnosperms

Division: Pinophyta
Class: Pinopsida
Order: Pinales

Family: Cupressaceae
Genus: Sequoia
Species: Sequoia sempervirens

COMMON IVY

Hedera helix

Common Ivy

Botanical and Ecological Characteristics

Description

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Location: N ative to Europe and Western Asia but has become widely naturalized across North America and other temperate regions.

Characteristics: Common Ivy is a versatile evergreen vine with glossy, dark green, lobed leaves that can climb and spread extensively. It is well-known for its ability to cover and cling to various surfaces using aerial rootlets.

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It has the unique ability to climb and spread over large areas using specialized aerial rootlets that secrete a sticky substance, allowing the ivy to adhere to surfaces like walls, trees, and rocks. This climbing habit not only enables the plant to reach sunlight in shaded environments but also helps it cover vast areas of ground as a creeping vine, making it highly adaptable to different habitats. One of the most interesting aspects of common ivy is its dimorphic growth pattern. The plant exhibits two distinct growth phases: the juvenile phase, characterized by lobed leaves and rapid climbing, and the mature phase, where the leaves become unlobed and the plant begins to produce small, greenish-yellow flowers. These flowers bloom in late autumn and are a critical source of nectar for pollinators, such as bees and butterflies, during a time when few other plants are flowering. The flowers are followed by clusters of black, berry-like fruits, which are consumed by birds, aiding in seed dispersal. Common ivy's ecological role is multifaceted. While its dense foliage provides valuable shelter and nesting sites for birds and insects, it can also outcompete native vegetation by forming thick, impenetrable mats that block sunlight and reduce biodiversity.

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Clade: Angiosperms

Clade: Eudicots
Clade: Asterids
Order: Apiales

Family: Araliaceae
Genus: Hedera
Species: Hedera helix

FRENCH BROOM

Genista monspessulana

French Broom

Botanical and Ecological Characteristics

Description

Location: Native to the Mediterranean region but has become invasive in various parts of California, Australia, and South America. It typically thrives in disturbed areas, such as roadsides, and open spaces with well-drained soil.

Characteristics: French Broom is a dense, shrubby plant with bright yellow, pea-like flowers that bloom in clusters during spring and early summer.

French broom is highly adaptable and thrives in a variety of soil types, including poor and sandy soils, and can establish itself in disturbed areas, making it a successful invader in many regions outside its native range. One of the most notable aspects of French broom is its ability to fix atmospheric nitrogen into the soil through a symbiotic relationship with rhizobial bacteria in its root nodules. This adaptation allows the plant to improve soil fertility, which can further enhance its competitiveness against other species. However, this same trait also contributes to its invasive nature, as it can alter soil conditions to favor its own growth while suppressing native plants. French broom produces large quantities of seeds that are encased in hard, durable pods. These seeds can remain viable in the soil for several years, allowing the plant to persist and spread over time. The seeds have a tough outer coating that requires specific conditions, such as scarification from fire or physical abrasion, to break dormancy and germinate, which makes the plant well-suited to fire-prone environments. Additionally, French broom's high flammability contributes to increased wildfire risks in invaded areas, as the plant's dry, woody branches can easily ignite and spread fires.

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Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Clade: Angiosperms

Clade: Eudicots
Order: Fabales

Family: Fabaceae
Genus: Genista
Species: Genista monspessulana

GARDEN NASTURTIUM

Tropaeolum majus

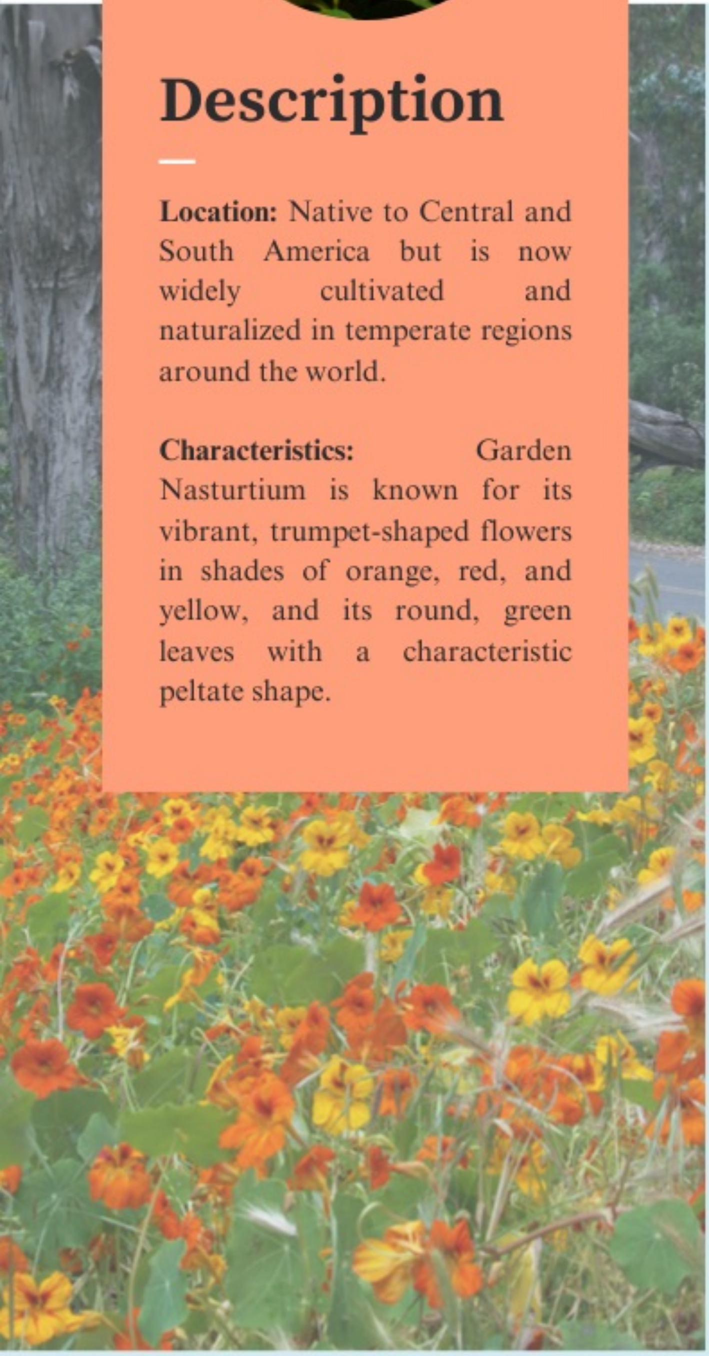
Garden Nasturtium

Botanical and Ecological Characteristics

Description

Location: Native to Central and South America but is now widely cultivated and naturalized in temperate regions around the world.

Characteristics: Garden Nasturtium is known for its vibrant, trumpet-shaped flowers in shades of orange, red, and yellow, and its round, green leaves with a characteristic peltate shape.



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The plant thrives in a range of soil types, including poor and well-drained soils, and can tolerate varying light conditions, from full sun to partial shade.

Its resilience is partly due to its ability to produce a robust root system that supports its rapid growth. The nasturtium's leaves and flowers are not only visually appealing but also edible, with a peppery, mustard-like flavor that adds a spicy kick to salads and dishes. Additionally, the plant's seeds can be pickled and used as a condiment similar to capers. It acts as a natural pest repellent, particularly against aphids, whiteflies, and certain types of beetles. The plant’s bright flowers attract beneficial insects, such as pollinators and predatory insects that help control garden pests. Moreover, nasturtium has been used as a companion plant in gardens to enhance the health and growth of nearby crops, due to its ability to repel harmful pests and attract beneficial insects. Interestingly, garden nasturtium contains a variety of bioactive compounds, including glucosinolates, which contribute to its characteristic peppery taste and have been studied for their potential health benefits. These compounds are thought to have antimicrobial and anti-inflammatory properties.

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Clade: Angiosperms

Clade: Eudicots
Order: Brassicales

Family: Tropaeolaceae
Genus: Tropaeolum
Species: Tropaeolum majus

GREAT HORSETAIL

Equisetum telmateia

Great Horsetail

Botanical and Ecological Characteristics

Description

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Location: Native to Eurasia and North America, commonly found in wetlands, marshes, and along stream banks. It thrives in moist, sandy, or loamy soils, often in areas with high water tables.

Characteristics: Great Horsetail is a perennial plant with jointed, reed-like stems that can grow up to 6 feet tall, and it features a distinctive, bushy, brush-like appearance.

It belongs to a group of plants known as horsetails, which have changed little over time and are often referred to as "living fossils." The plant's stems contain silica, which contributes to its rigidity and makes it resistant to herbivory, as well as giving it a rough texture. Great horsetail reproduces both sexually and asexually. In the spring, it produces spore-bearing cones (strobili) at the tips of its stems. These spores are dispersed by the wind and can germinate into small, independent gametophytes. These gametophytes eventually develop into new sporophyte plants. Additionally, the plant can spread vegetatively through underground rhizomes, which are capable of producing new shoots and allowing the plant to rapidly colonize new areas. This ability to spread both through spores and rhizomes contributes to its success in a variety of environments. An interesting feature of great horsetail is its traditional use in abrasive cleaning. The high silica content of its stems makes them useful for scrubbing pots and pans, a practice that dates back to ancient times. The plant has also been used in traditional medicine for its diuretic properties, with extracts historically used to treat urinary tract infections and promote kidney health.

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Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Division: Polypodiophyta (or Equisetophyta)

Class: Polypodiopsida (or Equisetopsida)
Order: Equisetales

Family: Equisetaceae
Genus: Equisetum
Species: Equisetum telmateia

GREATER PERIWINKLE

Vinca major

Greater Periwinkle

Botanical and Ecological Characteristics

Description

Location: Greater Periwinkle is native to Europe but has become widely naturalized in North America, often found in shaded woodland areas, gardens, and along edges of forests.

Characteristics: Greater Periwinkle is a trailing evergreen plant with glossy, dark green leaves and distinctive, funnel-shaped, pale blue to violet flowers that bloom in spring and summer.

The plant spreads rapidly through both above-ground runners and underground rhizomes, allowing it to quickly colonize large areas. This ability to spread makes it highly effective as ground cover, but also contributes to its potential invasiveness in non-native environments. Unlike many perennials that die back in winter, greater periwinkle retains its foliage year-round, providing consistent ground cover and visual interest in all seasons. Its leaves are rich in alkaloids, including vincamine and vincristine, which have been studied for their medicinal properties. Greater periwinkle produces small, funnel-shaped flowers that are pollinated by insects, such as bees and butterflies. The flowers give way to small, paired seed pods that release seeds for further propagation. Additionally, the plant can reproduce vegetatively from its runners and rhizomes, which can develop into new plants and contribute to its spread. However, its aggressive spreading can lead to challenges in managing and controlling its growth, particularly in areas where it is not native. Flowers attract pollinators like bees and butterflies, while the dense foliage provides shelter for small animals and insects.

UC Berkeley Fire Trail

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes

Clade: Angiosperms
Clade: Eudicots
Order: Gentianales
Family: Apocynaceae

Genus: Vinca
Species: Vinca major

IVY BROOMRAPE

Orobanche hederae

Ivy Broomrape

Botanical and Ecological Characteristics

Description

Location: Ivy Broomrape is native to Europe and parts of Asia and typically grows in shaded, forested areas where its host plants, such as ivy, are abundant.

Characteristics: Ivy Broomrape is a parasitic plant with unique, leafless stems that can reach up to 12 inches tall, featuring a cluster of small, tubular flowers.

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Ivy broomrape is a parasitic plant that lacks chlorophyll and depends entirely on its host, typically ivy, to survive. This plant attaches itself to the roots of its host using specialized structures called haustoria, which penetrate the host's tissues and siphon off water and nutrients. Ivy broomrape's pale yellow to brownish-purple flowers emerge in late spring to summer, producing seed capsules that can release thousands of tiny, dust-like seeds, which are easily dispersed by wind or water. A unique botanical characteristic of ivy broomrape is its complete lack of leaves and true roots, reflecting its total dependence on its host for survival. This obligate parasitism means that the plant cannot photosynthesize and relies solely on the host for all its energy and nutritional needs. The haustoria not only anchor the plant to its host but also facilitate the transfer of nutrients, essentially making ivy broomrape a highly specialized and efficient parasite. Interestingly, the seeds of ivy broomrape can remain dormant in the soil for several years, only germinating when they detect chemical signals released by the roots of a suitable host. This adaptation ensures that the plant only begins its life cycle when conditions are favorable and a host is nearby.

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Clade: Angiosperms

Clade: Eudicots
Order: Lamiales

Family: Orobanchaceae
Genus: Orobanche
Species: Orobanche hederae

ITALIAN THISTLE

Carduus pycnocephalus

Italian Thistle

Botanical and Ecological Characteristics

Description

Location: Italian Thistle is native to the Mediterranean region and has become invasive in parts of North America, often thriving in disturbed soils, open fields, and roadsides.

Characteristics: Italian Thistle is characterized by its spiny, lobed leaves and tall, branched stems that can reach up to 3 feet in height. It produces vibrant purple to pink flowers encased in sharp, spine-tipped bracts.

UC Berkeley Strawberry Creek

Characterized by its spiny, lobed leaves and clusters of small, purple flower heads, this thistle can grow up to 6 feet tall. The plant is covered in sharp spines, which provide it with a robust defense mechanism against herbivores. Italian thistle produces a deep taproot that allows it to access water from deep within the soil, making it highly drought-tolerant and difficult to eradicate. Each flower head can produce hundreds of seeds, which are easily dispersed by wind due to their light, tufted structure known as a pappus. These seeds can remain viable in the soil for several years, leading to persistent seed banks that can quickly regenerate new plants when conditions are favorable. Italian thistle is known for its ability to rapidly colonize disturbed sites, such as roadsides, pastures, and abandoned fields. Italian thistle's flowers are adapted for pollination by insects, particularly bees and butterflies, which are attracted to its bright purple blooms. However, despite this ecological interaction, the plant's invasive spread often leads to negative impacts on native plant communities and the wildlife that depends on them. The decomposition of its spiny leaves and stems can contribute to changes in soil pH and nutrient levels, which may further disadvantage native plant species that are less adaptable to these conditions.

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Clade: Angiosperms

Clade: Eudicots
Order: Asterales

Family: Asteraceae
Genus: Carduus
Species: Carduus pycnocephalus

LAWN DAISY

Bellis perennis

Lawn Daisy

Botanical and Ecological Characteristics

Description

Location: Native to Europe and has naturalized in North America, commonly found in lawns, meadows, and grassy areas. It thrives in well-drained soils and is often seen as a common weed in turfgrass environments.

Characteristics: Lawn Daisy features small, daisy-like flowers with white petals and a yellow center, growing on low, rosette-forming stems.

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This plant has a low-growing habit, with a basal rosette of spoon-shaped leaves that allow it to hug the ground, avoiding damage from mowing or trampling. The lawn daisy's flowers are not just decorative; they are highly adaptive, capable of closing at night or during rainy weather to protect the reproductive organs, a phenomenon known as nyctinasty. Botanically, the lawn daisy is remarkable for its ability to reproduce both sexually through seed production and vegetatively through stolons, which are horizontal stems that can root at the nodes to form new plants. This dual reproductive strategy allows the daisy to quickly colonize lawns, meadows, and other disturbed sites. Each daisy flower head is actually a composite of many tiny florets, with the central yellow disc made up of tubular florets and the surrounding "petals" being ray florets. Its flowers, which bloom nearly year-round in mild climates, provide a consistent source of nectar and pollen for bees, butterflies, and other insects. One of the lawn daisy's unique ecological traits is its tolerance to compacted soils, a common condition in urban environments. This ability allows it to thrive in areas where other plants may struggle, making it a common sight in heavily used lawns and parks.

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Clade: Angiosperms

Clade: Eudicots
Order: Asterales

Family: Asteraceae
Genus: Bellis
Species: Bellis perennis

LITTLE ROBIN

Geranium purpureum

Little Robin

Botanical and Ecological Characteristics

Description

Location: Native to parts of Europe and Asia and is often found in woodland clearings, grasslands, and along edges of forests.

Characteristics: Features delicate, fern-like foliage with small, bright red to orange flowers that bloom in clusters.

The plant produces small, pale pink to purple flowers that bloom from spring to early autumn. These flowers, though modest in size, are efficient at attracting a variety of pollinators, including bees and butterflies, which are drawn to their subtle color and nectar. Botanically, Little Robin is a notable example of a plant with a flexible growth habit, able to thrive in a range of conditions from sunny open areas to partially shaded woodlands. The plant's finely divided leaves give it a feathery appearance, which helps reduce water loss and allows it to thrive in dry, rocky soils where other plants might struggle. The leaves are also slightly aromatic when crushed, releasing a mild scent that is characteristic of the Geranium genus. Little Robin reproduces primarily through seed production, with each flower producing a five-parted seed capsule that can eject seeds several feet away from the parent plant, a mechanism known as ballistic dispersal. This allows Little Robin to spread effectively, particularly in disturbed soils or areas with little competition from other plants. Little Robin plays a modest but significant role in its native habitats. It provides nectar for pollinators and its seeds are a food source for various small mammals and birds.

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Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Clade: Angiosperms

Clade: Eudicots
Order: Geraniales

Family: Geraniaceae
Genus: Geranium
Species: Geranium purpureum

MINER'S LETTUCE

Claytonia perfoliata

Miner's Lettuce

Botanical and Ecological Characteristics

Description

Location: Miner's Lettuce is native to North America, particularly in the western United States, and is commonly found in moist, shaded areas such as forest floors, stream banks, and underbrush.

Characteristics: Miner's Lettuce is a low-growing, edible green with rounded, succulent leaves and small, white or pink flowers that appear in loose clusters.

UC Berkeley Strawberry Creek

Miner's lettuce (Claytonia perfoliata), also known as Indian lettuce or winter purslane, is a hardy annual plant native to North America, particularly the western regions.

Recognizable by its circular, disc-like leaves with small white to pinkish flowers emerging from the center, miner's lettuce is both visually distinctive and ecologically valuable. The leaves are succulent and tender, allowing the plant to retain water and thrive in moist, shady environments, often carpeting forest floors and disturbed sites during the cooler months. Botanically, miner's lettuce is intriguing for its unique leaf structure. The round "leaves" that most people notice are actually modified bracts, with the true leaves appearing lower on the stem. This adaptation helps the plant maximize photosynthesis while minimizing water loss, a critical feature in its native habitats, which often experience dry periods. The plant's stems are slender and weakly upright, typically growing in a low, sprawling manner, which allows it to cover large areas and outcompete other plants in its environment. Miner's lettuce is primarily self-pollinating, though it can also be pollinated by small insects. The plant produces tiny seeds that are dispersed by gravity and water, enabling it to spread effectively across the forest floor or along stream banks.

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes

Clade: Angiosperms
Clade: Eudicots
Order: Caryophyllales

Family: Montiaceae
Genus: Claytonia
Species: Claytonia perfoliata

POISON HEMLOCK

Conium maculatum

Poison Hemlock

Botanical and Ecological Characteristics

Description

Location: Poison Hemlock is native to Europe and North Africa but has become widespread in North America, often found in disturbed areas, along roadsides, and in riparian zones.

Characteristics: Poison Hemlock is a tall, biennial herb with feathery, finely divided leaves and small, white flowers arranged in umbrella-like clusters called umbels.

Poison hemlock (Conium maculatum) is a highly toxic biennial plant known for its tall, hollow stems, which can reach heights of up to 10 feet. The plant's stems are often marked with purple blotches, a distinguishing feature that helps in its identification. Its finely divided, fern-like leaves resemble those of parsley or carrot, making it deceptively similar to non-toxic plants. Poison hemlock produces clusters of small white flowers arranged in umbrella-shaped umbels, which bloom from late spring to early summer.Botanically, poison hemlock contains potent alkaloids, including coniine and γ-coniceine, which disrupt the central nervous system by interfering with neurotransmitter function. These toxic compounds make all parts of the plant—roots, leaves, stems, flowers, and seeds—extremely poisonous if ingested. Even small amounts can cause severe symptoms or death, particularly by respiratory failure due to paralysis of the respiratory muscles. Interestingly, poison hemlock's toxicity persists even when the plant is dried, making it a significant hazard in hayfields and pastures. Ecologically, poison hemlock thrives in disturbed soils and can often be found along roadsides, riverbanks, and fields.

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Taxonomy

Kingdom: Plantae
Clade: Tracheophytes

Clade: Angiosperms
Clade: Eudicots
Order: Apiales
Family: Apiaceae

Genus: Conium
Species: Conium maculatum

WESTERN SWORD FERN

Polystichum munitum

Western Sword Fern

Botanical and Ecological Characteristics

Description

Location: Western Sword Fern is native to the western coastal regions of North America, from California to British Columbia. It thrives in shaded, moist environments such as forest floors, stream banks, and coastal rainforests.

Characteristics: Western Sword Fern features large, arching fronds that can grow up to 4 feet long, with leathery, dark green leaflets arranged in a distinctively sword-like shape.

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The Western Sword Fern (Polystichum munitum) is a robust, evergreen fern native to the forests of western North America, particularly in the Pacific Northwest. Recognizable by its long, arching fronds that can grow up to 6 feet in length, the fern has a distinctive sword-like appearance, with each frond consisting of numerous lance-shaped leaflets that are finely serrated along their edges. The leathery texture and deep green color of its fronds allow the Western Sword Fern to thrive in the shaded understory of coniferous forests, where it forms dense, lush carpets. Botanically, the Western Sword Fern reproduces via spores, which are produced on the underside of its fronds in small, round clusters called sori. These sori are arranged in neat rows along the leaflets, giving the plant a dotted appearance underneath. The spores are dispersed by wind, allowing the fern to colonize new areas within its native habitat. Unlike flowering plants, ferns do not produce seeds, and their reproduction involves a two-phase life cycle, including a gametophyte stage, which is a small, heart-shaped structure that produces the reproductive cells. Its dense growth provides habitat and cover for a variety of small animals, including amphibians and invertebrates, while its roots help to stabilize the soil and prevent erosion in forested areas.

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes
Division: Polypodiophyta (or Equisetophyta)

Class: Polypodiopsida (or Equisetopsida)
Order: Polypodiales

Family: Dryopteridaceae
Genus: Polystichum
Species: Polystichum munitum

WHITE CLOVER

Trifolium repens

White Clover

Botanical and Ecological Characteristics

Description

Location: Native to Europe and Western Asia but is now widespread across North America and other temperate regions.

Characteristics: White Clover is a low-growing perennial with trifoliate leaves and small, spherical clusters of white to pink flowers. The plant is valued for its ability to fix nitrogen in the soil, improve soil fertility, and provide forage for livestock.

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White Clover (Trifolium repens) is a low-growing, perennial herb that is widely distributed across temperate regions of the world. Recognized by its trifoliate leaves, which often bear a faint white or light green "V" marking, and its small, spherical clusters of white to pinkish flowers, white clover is a common sight in lawns, fields, and along roadsides. The plant spreads through both seeds and stolons—above-ground stems that root at nodes to form new plants—enabling it to quickly colonize large areas. Botanically, white clover is a member of the legume family (Fabaceae), and like other legumes, it has a symbiotic relationship with nitrogen-fixing bacteria in its root nodules. This relationship allows the plant to convert atmospheric nitrogen into a form that is usable by plants, enriching the soil and reducing the need for synthetic fertilizers. This nitrogen-fixing ability makes white clover an important species in agricultural systems, where it is often used as a cover crop or in pasture mixes to improve soil fertility. A unique feature of white clover is its ability to thrive in a wide range of environments, from fertile soils to more challenging conditions such as compacted lawns or roadsides.

Taxonomy

Kingdom: Plantae
Clade: Tracheophytes

Clade: Angiosperms
Clade: Eudicots
Order: Fabales
Family: Fabaceae

Genus: Trifolium
Species: Trifolium repens